



For efficient production of powder coating. **First-class feeding and extrusion technology.**

»» The name Coperion is known for reliable, high-quality extrusion technology for manufacturing powder coating. ZSK extruders have made a unique name for themselves with their high output capacity and long service life.

Over 40 years of experience combined with the knowledge Coperion has gained from realizing over 800 extruders is built into every ZSK system. This allows you to profit from the size of a global market leader in twin screw extruders, high production capacities with the highest quality standards in production and continuous research and development efforts. An agile team exclusively supports clients in the powder coating industry, addressing concerns and fulfilling wishes in short order.

With over 30 service locations worldwide: We are where you need us. More than 220 global service engineers and technicians are available to take care of your machines' and systems' maintenance or modernization as needed. Our spare parts warehouse is among the largest in the industry. It encompasses both Coperion original spare parts as well as those from suppliers, in their most current and earlier versions.

» EXTRUDER ASSEMBLY AT COPERION'S STUTTGART LOCATION



Advantages for you

Over 800 ZSK extruders for powder coating manufacturing installed
Over 2,500 employees at more than 30 locations worldwide
In-house design department for standard and specialized solutions with comprehensive quality management
Process engineers for individual ZSK system design depending upon powder coating formulation
Proprietary control solutions with remote servicing via Coperion ServiceBox
Production and assembly with the most modern machines, using the highest quality standards
Collection of historical data and comprehensive documentation of implemented ZSK systems
Unique test labs for testing optimal extrusion system design under production conditions

Quality is our benchmark

High quality demands drive our entire company as well as our daily activities – from continuous research and development through project management to assembly. Research and development activities at Coperion are very comprehensive, ranging from simulating various component designs, through analyzing mixing effects in the process section, to investigating the product wear caused by different screw elements. Important findings from research flow directly into new developments and process optimizations, improving service, product quality, and efficiency of twin screw extruders.

Assembly takes place in accordance with the highest quality requirements, using the newest technology and implementing proven Coperion standards for high-quality production. Quality inspection plans and factory acceptance tests enable traceability of even individual assembly and installation steps. Production of all of the extrusion systems' core components takes place in house: from barrels, screw elements and screw shafts up to switch cabinet installation.



› 3-DIMENSIONAL BARREL INSPECTION CENTER



› MODERN MACHINING CENTER FOR SCREW ELEMENT MANUFACTURING

» ZSK twin screw extruders are flexible – residence time, screw configuration and throughput can be modified quickly and individually to specific requirements.

Excellent product quality and high throughputs

Due to its excellent mixing behavior and gentle product handling, ZSK twin screw extruders make absolutely homogeneous distribution of coating components in powder possible. Achievable high throughput rates as well as its tried-and-tested longevity make the extruder a proven success for any powder coating manufacturer.

ZSK extruder in Mv PLUS design

For processing large quantities of powder, Coperion offers the ZSK extruder in Mv PLUS design. This series combines an optimally balanced large free screw volume with high screw speeds and specific torque – ideal for top throughput rates of products with low bulk density, difficult feed intake, or high filler content.

Best components ensure longevity

The use of high-quality, proven components ensures process reliability and thus consistent product characteristics. Using individual wear protection solutions, we achieve the longevity of our extruders – and even for our components with product contact. For example, screw barrels are of particular wear protective design and screw elements are made from extremely wear-resistant powder-metallurgic materials. Downtimes and maintenance are thus reduced to a minimum.



TECHNOLOGY ADVANTAGES AT A GLANCE

- › Highest throughput rates at large free screw volumes and screw speeds up to 1,200 min⁻¹
- › Long system service life with maximum reliability
- › Short cleaning times
- › Optimal feed intake of fines, i.e. using Coperion's ZS-B side feeder
- › Screw configuration modified to individual formulation for low material temperatures and very good mixing behavior for consistent product quality



› TWIN SCREW EXTRUDER ZSK 43 Mv PLUS
IN compact DESIGN WITH INTEGRATED
CONTROL SYSTEM



Low contamination machine design

The ZSK extruder design offers smooth surface area for easier cleaning and removable covers. That allows for quick access for cleaning and maintenance and at the same time protects parts that are damageable and susceptible to dirt.



Modular design

The ZSK extruder process section consists of several barrels in which the screws rotate in the same direction. The configuration of the barrels and screw elements is individually designed for your formulation. It can be modified for future applications at any time.



ZS-B side feeder

Depending upon the properties of raw materials to be fed, it may be appropriate to use the ZS-B side feeder. It functions like a small extruder and leads even material with low bulk density into the extruder's process section with process reliability.



Feed hopper with quick-release clamps

The feed hopper is clamped to the ZSK process section with screws and is easy to detach simply by loosening the screws. Cleaning effort is reduced to a minimum.



Control systems

Coperion offers proprietary, individual solutions from standard controls to tailor-made controls for entire systems that can be integrated into existing 4.0 environments with no difficulty and standardized with numerous basic functionalities. Built-in ServiceBox enables fast, comprehensive remote servicing.



Volumetric and gravimetric feeders

Feeding takes place via volumetric or gravimetric feeders. Coperion K-Tron highly accurate feeders are accessible and are easy to clean. With their robust design, they are optimally adapted to ZSK technology and ensure constant feeding of raw materials.

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